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Abstract

Four researchers discussed their studies of oral reading miscues within a round-table format. After each participant's description of the specific concerns and procedures of his study, the following topics were discussed: description and analysis of the miscue, correction strategy, relationship of the child's language to the language of the reading material, and comprehension. One study specifically analyzed substitutions; another analyzed grammatical restructurings; a third analyzed oral reading of a child's own writing; and a fourth analyzed qualitative and quantitative changes in miscues over an extended time period. Subjects of the studies ranged from beginning readers to advanced sixth-grade readers. All read new materials without assistance. Tape recordings of the readings were analyzed using the Goodman Taxonomy of Reading Miscues. Children were asked to retell some of the stories in their own words as a measure of comprehension. One group also wrote, following the retelling, the same story in their own words, and an analysis of the oral readings of the child's own manuscript was made. In general, total miscues per hundred words decreased as the children became older, and errors became increasingly more correct semantically and syntactically as the children became more proficient readers. Tables are included. (CM)

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SYMPOSIUM II

APPLICATIONS OF PSYCHOLINGUISTICS TO KEY PROBLEMS IN READING

"Studies of Reading Miscues"

RE 002 295

IRA - KANSAS CITY, 1969

INTRODUCTION

Yetta Goodman:

The main purpose of our studies has been to describe oral reading phenomena in selected readers, based on the assumption that reading is a psycholinguistic process. We used similar procedures, but had some specific differences. These specific differences will be delineated by each of us as we talk about our individual research studies.

The similar procedures involved giving children material to read that they had never seen before. The readers were given no assistance, and had to use whatever information and strategies were available to them as they read. Their overt behavior was tape recorded and analyzed with the main emphasis of the analysis on the miscue.

A miscue occurs when the observed response - what the child actually says when he reads orally - , differs from the expected response - what the researcher expects the child to say. All miscues were recorded and coded using the Goodman Taxonomy of Reading Miscues. The Taxonomy analyzes miscues in terms of the levels of cue systems in the language, how the children handle the miscues once they are produced, and the types of miscues.

Children were asked to retell some of the stories in their own words, and these retellings were rated for comprehension. The children were not given questions to elicit comprehension because the questions might have linguistically cued answers. Instead, we just asked them to retell the story in their own words.

SPECIFIC CONCERNS OF STUDIES

Goodman:

My particular study involved six beginning readers who read material new to them at monthly intervals, excluding the two summer months, from January to November. Each child read from 17 to 21 stories, and together the group produced about 3,000 miscues. The data produced cross-sectional and longitudinal information.

My colleagues will also describe the unique aspects of their studies, and then we will discuss four major aspects of the reading process.

Paul David Allen:

My research consisted of an analysis of oral reading substitutions at grade levels 2, 4, and 6. My sample consisted of five

average readers at each of the grade levels mentioned. These fifteen children each read one story from an unfamiliar basal reader on their grade level. A total of 1,521 miscues was generated by these children.

Substitutions can occur at several levels, including the sub-morphemic, bound morpheme, free morpheme, word, phrase, clause, and sentence levels. For example, when a subject met the sentence, What can I do for you?, and read, What do you want?, a substitution occurred at the sentence level. A substitution of The little boy for The boys represents a substitution at the phrase level. This kind of an interpretation of substitutions allowed for the analysis of miscues on several levels at the same time.

Carolyn L. Burke:

The concern of my study was to analyze the oral reading phenomena of a group of highly proficient upper elementary readers, and to pay particular attention to the effect and significance of miscues involving changes in grammatical structure. I termed such miscues restructurings.

My subjects were six children in the sixth grade who were judged by standardized tests and teacher evaluation to be reading one year above their grade level. The data gathering procedure were identical to those used by the other members of the panel. The subjects read an unfamiliar story from the eighth grade text of a basal reader, and no aid was offered to them. After reading, the children retold the story in their own words. All sessions of the research were taped.

Helen Martellock:

My study used The Goodman Taxonomy in relation to a different kind of reading task. The children involved in my research were asked to retell, and then write, in their own words, a story which they had previously read from a basal text. Following the completion of the writing task, the children were asked to read orally what they had written. The Goodman Taxonomy of Reading Miscues was used in the analysis of the subjects' oral reading of their own manuscripts. The other data were analyzed in different ways.

The population of this study is the same as that of Carol Burke's. We used the same subjects and the same stimulus story, but required different task performances.

My discussion here will be concerned mainly with the oral reading performance of the subjects in the reading of their own manuscripts.

THE MISCUE

Goodman:

The first aspect of the reading process which we will examine

is the miscue itself. The six beginning readers whom I studied made from 4 to 14 miscues per hundred words, with adequate comprehension. However, the quantitative listing of miscues seems to be of little importance. Rather, it became evident that the type of miscues which beginning readers make change qualitatively as they become more proficient readers.

The substitution miscues accounted for more than one-half of the total miscues made by these readers. These miscues changed in a number of different ways as the children became more proficient.

First of all, miscues changed from gross to closer relationships of phoneme-grapheme correspondence. A less proficient reader would read monkey for man; a more proficient reader read men for man. Substitutions also had closer syntactic and semantic relationships as the children became more proficient readers.

Omission miscues accounted for the second largest type of miscue among the beginning readers. As the children became more proficient readers, omission miscues changed qualitatively from the omission of words or phrases that were simply unknown, to the omission of words and phrases which resulted in acceptable reading passages.

The number of insertion miscues increased as children became more proficient, but this type of miscue represented only a small percentage of the total number of miscues among the beginning readers.

Reversal miscues represented the smallest percentage among beginning readers, and decreased as the children became more proficient readers. It became evident that reversals don't seem to warrant the type of attention which many reading teachers give to them, since they represent only an insignificant problem.

Miscues occurred for beginning readers at all grammatical levels; usually at the word or phrase level, but also at the sub-morphemic, morphemic, and clause levels.

Allen:

In my analysis of substitution miscues, I found that the bulk of the miscues - over ninety percent - could be analyzed at the phrase level. Although these miscues were involved with sub-morpheme, morpheme, and word levels, it was only when they were examined at the phrase level that any real analysis of their relationship to the reading process was rewarding.

For example, one child read, the word definitions were helping me for, the word definitions were helping my marks. The substitution of me for my marks could be regarded simply as a one word substitution for a two word stimulus. For the purpose of analysis, however, the fact that a noun phrase was substituted for another noun phrase is much more significant.

In another example, a subject read, the sun was so pleasant and the grass was so soft for the sun was so pleasant and the grass so soft. The insertion of was could be analyzed merely as a word insertion, but much more insight into the reading process is realized when we analyze it at the clause level, representing an insertion of a deletion transformation.

Burke:

The proficient sixth grade readers had a moderate range of miscue occurrence - from 2.4 to 5.2 miscues per hundred words. For the beginning readers, you will remember, the range had been from 4 to 14. This means that the range of miscues narrowed as the readers became more proficient and passed through developmental stages.

Due to the structure of our language, the reading process, and the competence of the readers, miscues that occurred at one grammatical level generally involved other grammatical levels as well. For example, the substitution of further for farther involves one sound difference at a phonemic level, but it also involves the substitution of one word for another. Among the proficient readers there were no miscues involving only one grammatical level. These readers were all functioning with syntactic structures, and their miscues always involved some aspect of the grammar which was larger than the phoneme level.

In terms of grammatical fit, Table I indicates that the readers demonstrated constant improvement in their ability to retain the grammatical structure of the material. One significant difference occurred when I examined only the restructuring miscues of the proficient sixth graders. Grammatical fit in regard to nouns, verbs, and function words, continued to fit the pattern set up for miscues generally, but this did not happen with adjectives and adverbs.

Adjectives were replaced on an almost equal basis by other adjectives, by nouns, or by function words. This situation seems to be explained by the structure of English syntax.

Nouns and adjectives follow determiners with equal regularity in our language. One could say either the sheep dog or the dog. There is no prior cue in the sentence structure which aids the reader in anticipating either an adjective or a noun immediately following a determiner in a noun phrase.

Similarly, either an adjective or a function word can occur in the following structure: The sheep dog is (blank). The reader could say, The sheep dog is hungry. or The sheep dog is at its post guarding the sheep.

Obviously then, at those points where the structure of our language allows for alternate structures to occur, there is an increased possibility for structurally involved miscues to occur.

The children, in their reading, made use of this flexibility in the language.

In regard to graphic and phonemic proximity, Table II indicates that we had a slightly different development with the older readers. As the younger readers developed, the graphic and phonemic proximity of their miscues tended to increase. Then a plateau seemed to be reached around the fourth grade level. And finally, there was a slight decline in proximity for the sixth grade readers.

Rather than interpreting this phenomenon as being a difficulty, it should be noted that the children were moving toward an increased consideration of syntactic and semantic concerns, and away from graphic and phonemic concerns. This position is upheld by the fact that syntactic proximity and semantic proximity increased for my subjects. Eighty-one percent of the miscues of these proficient sixth graders was fully syntactically acceptable; sixty-one percent was fully semantically acceptable.

The proficient sixth grade readers made all of the same kinds of miscues as did the younger subjects - substitutions, insertions, omissions, and reversals - but the quality of the miscues changed. Substitutions, for example, were seldom the result of not knowing the word. He was returning to the camp. was often read, He was returning to camp. The readers omitted the from the text, but I don't think that anyone would question the fact that the readers actually knew how to read the. Actually, the children had moved to a preferred form, and in this instance, they were probably more correct than the author of the text had been.

Reversal miscues, which had been very minor for the beginning readers, increased slightly for my subjects. They were never very significant in number, but when they did occur for my proficient readers, it was generally at the phrase level and not at the word level. For example, He ran happily. became He happily ran.

This next aspect was true for all of our studies. No one particular grammatical function gave any special or undue problem to the readers, at any developmental level. Grammatical functions occurred in miscues in the same proportion as they had occurred in the text.

Martellock:

When reading their own manuscripts, children also made miscues, but miscue categories differed somewhat because they were dealing with their own language. Substitution miscues which were made by the subjects during the oral reading of their manuscripts generally retained the grammatical function of the expected response; for example, pups for puppies.

The other researchers reported that the substitutions made

by their subjects showed some semantic distance between the observed response and the expected response. In my study, however, the substitutions were generally semantically synonymous. When reading from the text, one subject read cowboy for shepherd. When reading from their own manuscripts, the children usually made such substitutions as shepherd for shepherd - a closer meaning correlation.

There was then, a closer semantic proximity in the substitutions made by children reading their own manuscripts than in the substitutions made by subjects who were reading text materials.

In the reading of my subjects, omission miscues were frequently associated with false writing starts or editing strike-outs. This extraneous material in the text seemed to cue omission miscues. Spelling errors were also frequently found in close proximity to omission miscues.

One other type of omission miscue was found. Due to an abundance of run-on sentences in the subjects' manuscripts, conjunctions had been used quite liberally. During oral reading, however, these conjunctions were frequently omitted by the subjects.

When insertion miscues occurred, they were most frequently those of intensification, such as, He built one more fire. for He built one fire. No reversals occurred in the oral reading of the subjects in my study.

Summarily then, when reading their own manuscripts children seem to make more frequent use of a semantic cue system than they do when reading textual materials. Syntactic cues decreased in their relative importance to the task, because the subjects were secure in the syntactic structures of their own idiolect, which had been employed in the writing task.

Implications - The Miscue

Goodman:

Having completed our discussion of one aspect of the reading process, the miscue, we would like to suggest some implications.

Miscues are a normal part of the reading process. It is the quality of the miscue which is important for diagnosis, rather than the type of miscue or the number of miscues per hundred words.

The miscues of non proficient readers tended to be not overly complex, and were often responses to graphic display and/or habit strength associations. As children became better readers, however, they made "better" miscues. By "better", we mean miscues that were more productive or more demonstrative of complex processing. In less proficient readers, miscues often occurred at one level of analysis. A miscue might be a simple insertion or omission of a sub-morphemic element. In more proficient readers, however, an

insertion miscue or substitution generally affected more than one level.

We would like to suggest that teachers should encourage children to work out their own reading problems, either by reading further in the text in order to encounter words and phrases in other contexts, or to reread and correct. Teachers, and the other children in the classroom, should avoid giving words to the reader the moment he makes a miscue. The children should be helped to develop strategies which will enable them to make the best use of their knowledge of their language - which they have obviously brought to the reading task.

Further, words should never be introduced out of the context of language. Context can change the grammatical function of words, their syntactic relationship to other words, the meaning of words, and their pronunciation and intonation.

CORRECTION STRATEGY

Burke:

The next aspect of the reading process that we would like to consider is the use of correction strategy. Corrections ranged from thirteen percent to thirty-two percent of the total miscues. As it did for total miscue occurrence, the range narrowed as readers gained competence and passed through succeeding developmental stages.

There was no significant relationship of correction attempts to any aspects of the reading process that are generally designated skill areas, such as phonemic relationship, graphemic relationship, grammatical function, or any of the common word attack skills. Correction strategies operated in relation to semantic and syntactic acceptability and proximity. There was much less tendency to correct miscues that were semantically and/or syntactically close to the original structure. The tendency to correct increased as the miscue moved further away from the text material in structure and/or meaning.

The proficient readers made consistent use of another aspect of the correction strategy - the silent correction. With great regularity, the children paused in their reading immediately before and after portions of the text that proved difficult for them, or in which they had miscued.

The proficient readers movement toward the use of silent correction strategies seemed to be an aspect of their more extensive use of silent reading in classroom situations. The younger readers, who were still doing primarily oral reading in their instructional situations, had a tendency to make more oral corrections.

Allen:

My data are in agreement with what was just reported. There was no relationship between the number of miscues and the number of corrections. I did find though, that readers with poor comprehension scores seldom corrected their miscues to the extent that better readers did. However, readers with high comprehension scores had both high and low incidence of correction.

The fourth graders in my study didn't seem to follow the same patterns as the sixth or second graders; they made very few corrections. The second and sixth grade subjects corrected twenty-eight percent of their miscues, but the fourth grade readers corrected only eighteen percent. The fourth grade subjects appeared to be more word bound, and they seemed to be afraid or unable to utilize other strategies. This could possibly be the result of emphasis on oral reading instruction or an over-emphasis on correctness. Whatever the reason, the fourth graders in my study did not seem to be as freewheeling as the second and sixth grade children.

Martellock:

I'd like to focus your attention on the notion that the kind of phenomena which take place when children read what they themselves have written are somewhat different from that which occur in other reading tasks.

When reading their own manuscripts, corrections, made through the process of regression, were at a minimum. Unfamiliarity with words or grammatical structures does not seem to be operative when children are reading their own manuscripts.

When corrections did occur, they fell into several categories. The first regards that of the previously noted miscues of close semantic proximity, as in shepherd for sheepherder. When the reader realized the difference between what he had said and what he had written in his manuscript, he regressed and corrected.

Another type of semantic miscue occurred when subjects read variant forms of what they had written. For example, one child read, She made one more effort which she was taught for She made one more effort which she had been taught, then realized the miscue and corrected by regressing.

The correction of miscues of semantic proximity appears to be somewhat different from those that were made when subjects were reading textual materials, and were thus confronted with the additional problems of differences between their own language and that of the text.

Regressions made for the purpose of correcting intonation were the most frequently noted category in my study. In the writing task, the children often omitted terminal punctuation. If one accepts the definition of a sentence as being that which occurs

between a beginning capital letter and terminal punctuation, one of my subject's might be said to have written a manuscript of one sentence. This rather general tendency to omit punctuation generated some confusion during the oral reading task in regard to intonational patterns. These miscues were corrected by oral re-reading in all but one instance. In this single instance, the reader paused, and then made his next utterance with the intonational pattern used at the beginning of a sentence, although he had not used a terminal intonation pattern in his preceding utterance. Apparently he had made a silent correction.

Another frequently noted correction strategy involved the process of editing the written material. Whenever an unintentional omission of a word had occurred in the written text, the reader corrected that omission during his oral reading. For example, one subject wrote: They stopped and mounted off their horse. She read it the first time exactly as she had written it, but then went back and corrected by reading, They stopped and mounted off of their horses.; thereby correcting the written omission of the function word of, and changing the singular horse into plural horses, but not changing the original concept of mounted.

This type of miscue is being analyzed in a separate category concerned with the editing strategies used by subjects in changing material which they have written.

Implications - Correction Strategy

Burke:

Our data in regard to correction strategies lead to the following implications: Corrections are a natural part of the reading process. They indicate that the reader, involved in the selective process of reading, is concerned with meaning, and wants the material to sound like language to him. He is regressing in order to correct anticipatory selections which have failed to be accurate.

If a reader attempts to correct, he will generally be successful. The correction attempts of beginning readers were successful over seventy-five percent of the time; my highly proficient readers were successful over ninety-seven percent of the time. Reading miscues which are semantically and syntactically acceptable tend not to be corrected. Children tend to correct naturally. This strategy then, appears to be a significant and basic one, and should be encouraged.

Correction behavior changes for individuals and across developmental levels and tasks. Younger readers, reading for meaning, where training has not interfered, will make moderate to large numbers of corrections. Older proficient readers of course reduce their number of oral corrections, but move to a greater use of silent corrections. Proficient readers who have done a great deal of oral reading will also reduce the number of oral corrections.

The percentages of corrections occurring per hundred words will change with such variables as concept load, area of concern, reader's background, the intent of the reader, and teacher expectation. Excessive corrections and/or lack of corrections can both be signs of reading difficulties. The reader may be so intent on providing an exact rendition that he fails to gain meaning; or he may simply see reading as supplying a response for each stimulus, and again not be concerned with meaning. Also, the lack of an attempt to correct, or unsuccessful corrections, can be an indication of a concept load which is too heavy, or sentence structure which is either too complex or comprised of a pattern unfamiliar to the reader.

RELATIONSHIP OF THE CHILD'S LANGUAGE TO THE LANGUAGE OF THE READING MATERIAL

Allen:

Our next area of concern is the relationship of the child's language to the language of the reading material.

Goodman:

Even in beginning readers, the grammatical function of the observed responses tended to be the same as the grammatical function of the expected responses. The beginning readers brought their understanding of syntax and semantics to the reading task. Their understanding and use of syntax seemed to have a greater influence on their reading miscues than did meaning. As they became more proficient, though, beginning readers made better use of both syntactic and semantic information.

The importance of syntactic information may be seen when we note the difficulty that some of the readers had when words that normally functioned as nouns appeared as adjectives in the text. For example, in one story, the word circus was introduced as an adjective - circus bear, circus balloon, and circus clown. In this position, the subjects were not able to read circus. When the same word appeared later in the story as a noun, the subjects read it without any problem.

In another story, the word river was first introduced in the title as a proper name, Singing River. It next appeared in the story as an adjective - river man. The subjects were unable to read this word until they came to The man fell into the river., The boat was along the river., and down the river. In this position, the children read river without hesitation.

Although syntactic and semantic categories correlated highly, it is possible for beginning readers to produce miscues which result in syntactically acceptable passages that are semantically unacceptable. Conversely though, it is seldom possible for the miscues of beginning readers to result in semantically acceptable passages that are syntactically unacceptable.

As he read, the beginning reader's knowledge of syntactic

structure represented more consistent resources for him than did his ability to produce meaning. Beginning readers brought their knowledge of intonational patterns to their oral reading. Even when they read sentences with list stress, they always ended with a fade fall intonation.

These readers often made dialect miscues which had no affect on their comprehension or reading proficiency. Although it was not supported by statistically significant data, observation of my particular population suggests that more proficient readers tend to move into their own dialect as they become more at ease with the reading material. The more proficient readers then, tended to make more dialect miscues as they got involved in the story.

When the language of the reading material was not like their own personal language, the children attempted to translate it into their own language system. In place of, It's I, the big Billy Goat Gruff., nearly every subject read, It's the big Billy Goat Gruff. And some children substituted they was going for they were going when it was natural in their own dialect.

Allen:

The sentence examples in Table IV have both syntactic and semantic acceptability to some degree. What is significant though, is that the power of syntax within the reader forced him to deal with underlying structures, as well as with the syntax of the material, in a way which would make sense to him. Many of the miscues represent substitutions at the verb phrase and noun phrase levels; others represent omissions and insertions of function words; and still others are really omissions of deletion transformations.

Whatever the case, these miscues cannot be explained simply by an examination of the surface relationships of the actual responses to the expected responses; nor are they just random approximations to the graphic stimulus.

Burke:

I would like to refer to the ethnic background of the six children with whom I worked. Two of these children were first generation Americans. English was a second language to their parents; one was of Polish extraction, and the other was Arabic. The other four subjects were all from the South. One was black and three were white, and all of them were from a lower social economic level.

These children all exhibited a great deal of dialect variation in their speech. Yet, they made no dialect miscues in their oral reading, except for some phonemic changes such as tin for ten, and word substitutions such as further for farther or lying for laying. None of their dialect miscues caused any change in structure. They were able to accommodate to the dialect of the author when it differed structurally from their own.

These readers also exhibited a great deal of control over syntactic structures, yet there were indications that some grammatical patterns still gave them problems. One portion of a text read: The nimble beast leaped away from her flashing teeth and was gone. The others followed after. The sentence, The others followed after. gave all of the subjects a problem. This surface level structure can be extended to say, The other coyotes followed after the first coyote. The children were able to handle the deletion of coyote from the sentence, but the deletion of the direct object, along with the retention of the adverb after, disturbed them. They altered the structure of the sentence, and read, The others followed her.

There appears to be developmental levels in the ability to handle different kinds of alternate grammatical structures. In general, miscues involving grammatical restructurings increased as the children became more proficient readers. Restructuring miscues are an indication of the fact that the reader is aware of the structures of his language, and is making use of them when he attacks reading material.

Martellock:

When they read their own manuscripts, the children were completely familiar with lexical items and the syntactic structures of the material, so the grammatical function of the miscues was generally the same as the expected responses. For example, one subject read, in the brush moving for in the bush moving, and on his high feet for on his hind feet.

These miscues were made by one of the less proficient readers, and it was observed that the less proficient readers in my study actually made miscues of closer graphic similarity than did the more proficient readers.

Although my research has not dealt directly with the comparison of children's language to the language of textual materials, one interesting phenomenon might be discussed here. One of my subjects was able to read his entire manuscript of more than 180 words without a single miscue. This was the first instance of a child reading without a single miscue which has occurred in all of the related research using The Goodman Taxonomy. However, when this subject had read the stimulus story from the basal text, he had accumulated the highest miscue rate per hundred words of all the subjects who had been involved in this task. This difference in one subject's performance might point out the extensive disparity between the child's own language and the language of the text.

Implications - Child's Language and Language of Reading Material

Allen:

In any sound theory of reading, the interaction of thought and language, the interaction involving the language of the reader

and the language of the material, and the interaction of the reader and the author, must all be taken into account. This would imply that reading text materials must consist of real language.

Authors, textbook writer and publishers, might profit by having children of various reading proficiencies try out their materials. An analyzation of the types of miscues made by the children could then lead to an understanding of what kinds of materials, what styles of writing, what uses of language, can actually cause reading problems.

Also, since the placement of words in certain grammatical functions appears to be more important to control than does the number of times the same word appears in a story or book, there are serious implications for those who write, publish, and utilize materials with controlled vocabularies.

COMPREHENSION

Martellock:

Comprehension is the subject of our final topic of discussion. In order to determine the subjects' comprehension of the stimulus story, I am analyzing their oral retelling of the story and their written manuscripts in terms of their understandings of theme, plot, characterization, and sequence.

Preliminary, but yet incomplete investigation, has yielded the following information: The subjects in my study are able to understand the events that occur in the story and how they are related to one another sequentially. They are able to tell and to write a coherent story which has a beginning, a middle, and an end. In one instance, however, the subject telescoped two characters into one; a shepherd and a sheep dog became one character. Events which were ascribed to the male sheep dog in the stimulus story, were ascribed to the shepherd in the written manuscript, and no mention was ever made of the male sheep dog. In another instance, the shepherd and the male sheep dog both died from the same unknown illness in the written manuscript; in the stimulus story the death of the shepherd was caused by an illness, and that of the sheep dog was caused by the attack of a coyote.

During the reading of another story, the phenomenon of plot telescoping was observed. This story told of two travelers who were amusing one another with tall tales as they walked along. A wager, regarding the acceptance of a tall tale by the listeners, was involved. The central plot then, was concerned with the wager. There were two complete stories, or subplots, within the main story. In his retelling of the story, one subject told a story which had no subplots, but contained elements of both subplots as well as the main plot. It had little resemblance to the original stimulus story, but it was complete, sequentially organized, and meaningful.

This might indicate that even proficient upper grade readers are sometimes unable to comprehend a highly involved plot. None of the subjects in this study seemed to show any high degree of comprehension in regard to the underlying themes of hunger and diligent adherence to a specified duty in the story of the sheep dog. The theme of the stimulus story was rarely stressed either in the oral retelling or in the written synopsis.

The use of colorful language in the text seems to be important to the reader, and appears to be well remembered. All of the subjects used either the entire last two sentences of the story, or significant portions of them, when they wrote their own manuscripts. The lines were: Don't shoot! That's Peggy! Get some grub, lots of it. Those children who did not quote this section verbatim, or with only slight modification, still used very similar language. One child wrote: Bring out some grub. despite the fact that grub is not a commonly used expression in his speech community.

Goodman:

Comprehension for beginning readers suggests that children's backgrounds and experiences are very much related to the meaning that they bring to, and get out of, the reading task. Children showed some level of comprehension in all of the material which they read. What seemed to be most important to their comprehension was the concept of the material. And a concept may be expressed by even one word.

One of the most proficient readers in my study had fairly high comprehension scores for all of his reading. In one story though, he read the word globe without any problem whenever it appeared, which was often. On the surface, he appeared to have a complete understanding of globe. His comprehension of this story was very low, however. He was unable to retell anything of significance, and didn't seem to know anything about what had occurred in the story. A globe had been on the desk in front of him during his reading and retelling. When he had finished, I pointed to this globe and asked him what it was. He replied, "That's the world."

Allen:

The fourth grade story which was used in my study centered around a goat. Although the word goat offered no difficulty to the readers, the concept of goat, the idea of a goat's general rascality and its eating habits, was basic to an understanding of the humor in the story. The children just did not seem to have this concept of a goat, although the word itself gave them no trouble.

In relation to this idea of comprehension, the phenomenon of self-teaching seemed to be going on with the children as they were reading. The first sentence in the story read by my second grade subjects, Did you ring my bell just now?, was important to the entire concept of the story. One subject read: Did you bring my

ball just now?. Throughout the first pages of the story, she tried all kinds of things with the word ring, including rights my ball, and wrongs my ball. Then, midway through the story, the subject corrected her miscue of ball for bell. As soon as she read bell, she also began to read rang and rung or ring correctly. By the end of the story, and during the retelling, it was apparent that she had understood the basic plot.

Burke:

The comprehension scores of the proficient sixth grade readers had no relationship to either the number of miscues that they made or to the number of corrections that they made.

Although the analysis of the reading process indicates that these readers had made some advances over even the average sixth graders, their comprehension scores did not necessarily and/or concurrently also improve.

By this stage of development, the basic reading competence skills are able to operate across wide variations in comprehension. From a scale of scores which allows a 40 point maximum, these readers had comprehension ratings that ranged from 13 to 29. The significant factors were the relationship of the child's prior knowledge and experience to the concepts involved in the story.

For example, a story concerning the function and responsibilities of a sheep dog during a drive from a grazing camp to a home ranch, would be more difficult for urban children than one dealing with the function and responsibilities of an umpire during a baseball game. Yet the structure and syntax of the stories could be identical.

Another significant factor which should be considered is the quality of the concepts which will need to be interpreted during the reading of the text. In the story about the sheep dog, the readers were able to ascertain the meaning of ewe as being a mother sheep, although they had not known this concept before the reading, and never were able to come up with an acceptable pronunciation for it.

Within the same story, there were references to land formations such as wash, rimrock, ledge, desert, meadows, and knolls. The terrain functioned significantly in the coyotes plan of attack upon both the sheep and the dogs. This relationship completely eluded the readers, and they had no clearer understanding of these land structures following the story than they did prior to the reading.

The third aspect which must be considered is the support that the surrounding grammatical structure offers to the concept. Perhaps a negative example will illustrate this best. One of the stories which the children read included lists of words which one of the characters reads from a dictionary. One of the words was philosophical. With repeated attempts, the children came close to,

and in some instances, actually produced the correct pronunciation. They tried words like physical, philactical, and philosophical, but they were never able to gain any concept of the term, because no grammatical aid was offered in relation to this word in the text.

Implications - Comprehension

Martellock:

There are a number of implications which we see as being particularly important in the area of comprehension. In their development of reading materials for classroom instruction, writers and publishers should be concerned with plot development and complexity. Meaningful and clearly delineated themes in a story seem to add to the depth of meaning for the readers. Further, teachers need to instruct and aid children in finding the meaning enhancing elements of a story.

It is important to determine which concepts children should gain from their reading, and how these concepts are to be learned. Teachers need to ask themselves some questions in regard to which concepts are too difficult, and what needs to be done in order to provide sufficient experiential and material background to make concept developments possible. Closely related to this, is the idea that development and expansion of concepts should be the area of concentration in instruction rather than a vocabulary development based mainly on dictionary word meanings.

Also, the notion that there seems to be little correlation between reading proficiency and the levels of comprehension should be explored further. Much more research in regard to reading comprehension tests is needed, and teachers should begin to do some serious thinking about what these tests purport to measure. And finally, another contribution to this area should come from a study of the relationship of various literary styles to comprehension.

CONCLUSION

Martellock:

During this presentation of some of the findings from our studies, we have attempted to give you a capsule view of our various studies in the hope that what we have reported here will indicate the kind of knowledge which is available to the researcher through the miscue analysis approach in the study of reading. We have attempted also to indicate some further areas of needed research, and some implications and changes in regard to teaching strategies in the area of reading instruction.

TABLE I

GRAMMATICAL FIT

	Beginning Readers	Second Grade	Fourth Grade	Sixth Grade (a)	Sixth Grade (b)
NOUN FOR NOUN	77%	65%	76%	82%	86%
VERB FOR VERB	57%	88%	89%	88%	84%
ADJ. FOR ADJ.	64%	50%	58%	73%	77%
ADVERB FOR ADVERB	32%	40%	39%	64%	70%
FUNCTION WORD FOR FUNCTION WORD	60%	69%	88%	89%	94%

* * * * *

TABLE II

RELATIONSHIPS BETWEEN E.R. AND O.R.

	Second Grade	Fourth Grade	Sixth Grade (a)	Sixth Grade (b)
GRAPHIC PROXIMITY	5.4	6.0	5.2	5.2
PHONEMIC PROXIMITY	4.4	5.0	4.1	4.1
SYNTACTIC PROXIMITY	6.8	7.4	7.1	7.4
SEMANTIC PROXIMITY	5.2	4.1	4.1	5.2

* * * * *

TABLE III

SYNTACTIC AND SEMANTIC ACCEPTABILITY

	Second Grade	Fourth Grade	Sixth Grade (a)	Sixth Grade (b)
FULL SYNTACTIC ACCEPTABILITY	71%	77%	74%	81%
FULL SEMANTIC ACCEPTABILITY	43%	43%	44%	61%

* * * * *

TABLE IV

1. If you ^{had} have a contest, then all the mothers whose ^{babies don't} babies don't win will be mad at you.
2. ...the word definitions were helping ^{me} my marks in English, too.
3. "But he's going ^{to be} on nine.
4. I sat in a large leather chair in ^{the} front of ^{the room} him.
5. What ^{do you want} can I do for you?
6. And ^{we'd} each ^{have} had one helping of potato salad.
7. ...unless ^{it's} a mother ^{goat} protecting her young.
8. ^{There are} lots of things babies use.
9. Every year ^{they} give a prize to the student....
10. The sun was so pleasant and the grass ^{was} so soft....
11. Go ^{on} ahead and cry!